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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/365,510      | 08/02/1999  | KENJI SUZUKI         | 35.C13719           | 1896             |

5514 7590 12/04/2002

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| EXAMINER |
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MAYES, MELVIN C

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| ART UNIT | PAPER NUMBER |
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1734

19

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                 |                               |  |
|------------------------------|---------------------------------|-------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>09/365,510   | Applicant(s)<br>SUZUKI ET AL. |  |
|                              | Examiner<br>Melvin Curtis Mayes | Art Unit<br>1734              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 September 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9 and 10 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
     a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

(1)

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

(2)

Claim 10 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for plasticizing and smoothing the surface opposite to the surface which is in contact with the image receiving layer, does not reasonably provide enablement for plasticizing and smoothing the surface opposite the surface which “comes into contact” with the image receiving layer. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

According to the specification, the thermoplastic film is overlapped with the recording medium and the overlapped portions of the recording media and thermoplastic film are then conveyed to roller which contains a heater where they are heated and pressurized for adhesion. The thermoplastic film is laminated then bonded onto the image-receiving layer (pg. 7, lines 5-10). While the specification provides support for plasticizing and smoothing the surface of the laminating film that is opposite to the surface which is in contact with the image-receiving layer (i.e. already “in contact” with image-receiving layer), the specification does not provide support

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for the language “which comes into contact” which means that the surface is not yet in contact with the image-receiving layer when plasticizing and smoothing is performed.

***Claim Rejections - 35 USC § 103***

(3)

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

(4)

Claim 10 is rejected under 35 U.S.C. 103(a) as obvious over Kuzuya 5,210,581 in view of Yamamoto et al. 4,865,675 and JP 10-44605.

Kuzuya discloses a method of recording an image comprising: recording an image on an image receiving member having a surface coated with a developer material; and laminating a film of PET on the image-formed surface of the image receiving member to prevent the image on the image receiving member from being damaged (col. 2, line 36 – col. 4, line 46). Kuzuya does not disclose plasticizing and smoothing the surface of the film on the image-formed surface.

Yamamoto et al. teach that to give gloss to print on a recording medium, a film is laminated on the recorded surface (col. 1, lines 52-55).

JP 10-44605 teaches that the protective layer of a recorded paper can be enhanced in glossiness by feeding the recording paper between a heated mirror-plane cylinder 40 of mirror plane of 200% or more and platen roller 34 to heat and press the protective layer to soften the protective layer (computer translation, paragraphs 0019-0024).

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It would have been obvious to one of ordinary skill in the art to have modified the method of Kuzuya for recording an image on an image receiving member by enhancing the glossiness of the protective PET film laminated on the imaged receiving member by plasticizing and smoothing the surface of the film, as Yamamoto et al. teach that film laminated on a recorded surface is also used to give gloss to the print and JP '605 teaches that glossiness of recorded paper can be enhanced by feeding the recorded paper with protective layer between a heated mirror-plane cylinder and platen roller to soften the protective layer. By feeding the laminate of protective PET film and imaged receiving member between a heated mirror-plane cylinder and platen roller to heat and press the protective film the film to enhance glossiness, as taught by JP '605, surface of the protective film is obviously plasticized and smoothed by heating and pressurizing means, as claimed.

(5)

Claims 1-4, 6, 9 and 10 are rejected under 35 U.S.C. 103(a) as obvious over Nakazawa et al. in view of Sneed, Yamamoto et al. and JP 10-44605.

Nakazawa et al. disclose a method and apparatus for laminating comprising: providing a printer having an ink jet recording means; forming an image on a sheet by the ink jet recording means; providing a laminating apparatus connected to the printer and having pressure rollers 40a, 40b; and feeding the printed sheet between the pressure rollers together with heat-reactive and pre-heated laminate films to laminate the films to the sheet by heating and pressurizing. The laminate films are used to improve the appearance and preservation of the sheet (col. 4, line 16 - col. 5, line 25, col. 20, lines 46-59). Nakazawa et al. do not disclose that the sheet for printing by the ink jet recording means has an image-receiving layer containing particles of diameter of 0.1

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to 10 microns for imparting a matted appearance or disclose providing after the laminating apparatus, heat and pressurizing means for plasticizing and smoothing the heat-reactive laminate film.

Sneed teaches that the in producing recording media used in ink jet printers, polymer binder is used in combination with fillers to form the coating composition on the support to provide the desired matte surface and opaque appearance. Sneed teaches that the fillers which provide a substantial means of ink absorption due to their porous nature should have a particle size of at least 0.1 microns and a maximum of 25 microns to produce the desired matte surface (col. 2, lines 32-36, col. 7, lines 24-57).

Yamamoto et al. teach that to give gloss to print on a recording medium, a film is laminated on the recorded surface (col. 1, lines 52-55).

JP 10-44605 teaches that the protective layer of a recorded paper can be enhanced in glossiness by feeding the recording paper between a heated mirror-plane cylinder 40 of mirror plane of 200% or more and platen roller 34 to heat and press the protective layer to soften the protective layer (computer translation, paragraphs 0019-0024).

It would have been obvious to one of ordinary skill in the art to have provided the sheet to be printed by the ink jet recording means in the method of Nakazawa et al. as a sheet having a coating containing particle fillers having particle size in the range of 0.1-25 microns, as taught by Sneed to produce the ink absorptive, matte and opaque surface of recording media for ink jet printing. Providing the sheet with a coating containing particles fillers of particle size in the range of 0.1-25 microns would have been obvious to one of ordinary skill in the art to provide an ink absorptive surface for ink jet printing, as taught by Sneed.

It would have been obvious to one of ordinary skill in the art to have further modified the method of Nakazawa et al. for protecting the image sheet by enhancing the glossiness of the protective laminate film laminated on the imaged sheet by plasticizing and smoothing the surface of the film, as Yamamoto et al. teach that film laminated on a recorded surface is also used to give gloss to the print and JP '605 teaches that glossiness of recorded paper can be enhanced by feeding the recorded paper with protective layer between a heated mirror-plane cylinder and platen roller to soften the protective layer. By feeding the laminate of protective PET film and imaged receiving member between a heated mirror-plane cylinder of mirror plane of 200% or more and platen roller after the laminating apparatus to heat and press the protective film to enhance its glossiness, as taught by JP '605, the surface of the protective film is obviously plasticized and smoothed by heating and pressurizing means of surface glossiness of 10% or greater than 70%, as claimed, and heating and pressurizing means for plasticizing and smoothing and having a surface roughness of 3 microns or less is obviously provided after a laminate section, as claimed in Claim 6.

Providing the heat reactive laminate films with a glass transition point or film-forming temperature lower than that of a binder polymer in the image receiving coating layer of the sheet would have been obvious to one of ordinary skill in the art to prevent deformation of the image recorded in the receiving layer during heat and pressure lamination of the heat reactive laminate films to the ink jet recorded sheet.

(6)

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above, and further in view of Shirota et al.

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Shirota et al. teach that a transparent laminate member for treating the image surface formed on paper by ink jet recording to impart gloss, etc to the recorded image can be a single layer of thermoplastic resin or a multilayer (col. 12, lines 51-62, col. 13, lines 22-34).

It would have been obvious to one of ordinary skill in the art to have modified the method of the references as combined by providing the thermoplastic laminate films as a multilayer as taught by Shirota et al. as an alternative to a single layer for providing a transparent laminate member for treating the image surface formed on paper by ink jet recording to impart gloss. The use of a laminate film as a single layer or multilayer, as taught by Shirota et al., would have been obvious to one of ordinary skill in the art.

#### ***Allowable Subject Matter***

(7)

Claims 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

(8)

Applicant's arguments filed September 19, 2002 have been fully considered but they are not persuasive.



(9)

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection, applied because of the amendment to Claims 1 and 6 separating the laminating step from a step of "plasticizing and smoothing" in Claim 1 and a limitation directed to the surface roughness in Claim 6. As set forth in the rejection, enhancing glossiness of a protective layer by softening the layer and pressing with a mirror-surface roller is suggested by JP 10-44605. Plasticizing and smoothing a film on an imaged medium is thus suggested by JP 10-44605 to enhance glossiness.

### *Conclusion*

(10)

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


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(11)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin Curtis Mayes whose telephone number is 703-308-1977. The examiner can normally be reached on Mon-Fri 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Melvin Curtis Mayes  
Primary Examiner  
Art Unit 1734

MCM  
December 2, 2002